

REMARKS

Claims 31-60 appear in this application. These claims replace claims 1-30 which have been cancelled. New claim 31 is a reprinted version of claim 1 and has been amended to more clearly define the scope of protection sought. Corresponding amendments have been made to independent claims 32 and 35, which are revised versions of claims 2 and 5. New claims 33, 37-39, 42-43, 46, 49, 55-57, 59 and 60 are revised versions of claims 3, 7-9, 12-13, 16, 19, 25-27, 29 and 30 that include clarifying amendments. The Applicant respectfully submits that the amendments to the claims are clearly supported by the application as originally filed.

Regarding the objections to the drawings raised by the Examiner in paragraph 1 of the Office Action, Applicant would respond as follows. Although the screw joint 25, identified in Fig. 1C is termed a typical (or generalised) screw joint, a screw joint having certain parameters as listed in the application (for example on page 9, line 35 to page 10, line 33 of the description as filed) may form part of the claimed subject matter. As such, to label Fig. 1C as prior art may be misleading and has not been made,. Reconsideration and withdrawal of this objection is requested. .

Regarding the objection raised in paragraph 2 of the Office Action, it is respectfully submitted that 200 and 300 are not provided as reference signs in the description, rather they are mentioned in the context of “like components with the assemblies 10 and 100 of FIGS. 1A and 3A share the same reference numerals incremented by 200”. This phrase being taken to mean that where a like component is present in both Fig. 4 and one of Fig. 1A or 3A, then the similar component in Fig. 4 is labelled with the same number as the corresponding component in Fig 1A or 3A but incremented by 200, e.g. like component 24 in Fig. 1A corresponds to component 224 in Fig. 4. A similar argument applies to the mention of 300. Thus, the comments in paragraph 2 of the Office Action are rendered moot.

Regarding the objections to the drawings raised by the Examiner in paragraph 3 of the Office Action, Fig. 3 has been amended to remove the reference characters 112 and 122. A marked-up drawing incorporating this change is enclosed for the Examiner's review and approval. As no new matter has been entered, it is believed that this drawing will be approved, so that a formal drawing is also enclosed.

In response to paragraph 4 of the Office Action, the abstract has been amended to remove the implicit wording “The invention relates to”. A clean copy of a substitute abstract is attached to this response.

In response to paragraph 6 of the Office Action, the description is amended to indicate that Application No. 10/619,402 has been abandoned.

In response to the objection in paragraph 7 of the Office Action, it is submitted that claim 31 as presently herein relates to a downhole tool while claim 32 relates to a downhole tool assembly. Claim 31 therefore relates to a “device”, and claim 32 to an “apparatus” including a “device”. Thus, the scope of the claims 31 and 32 varies and the claims are distinct. Thus, this objection should be withdrawn.

Claims 1-3 were rejected by the Examiner under 35 USC 102(b) as being anticipated by US 6 279 962 to McGarian et al (hereinafter "McGarian").

McGarian describes a safety joint comprising a top sub 4, a main shaft 3 and a body 2. The top sub 4 is connected to the main shaft 3 and locked against accidental release (column 3, lines 31-35). The Main shaft is in turn connected to the body 2 via both a screwed connection 13/22 (column 3, line 67 – column 4, line 3) and a locking collar 25. The locking collar 25 is slidably mounted on the main shaft 3 and biased towards the body 2 by a spring 26 so that grooves on the collar engage splines 23, 23A on the main shaft 3 (column 4, lines 13-17) and also so that dogs 28 on the collar 25 engage with corresponding dogs 16 on the body 2 to prevent slippage (column 4, lines 40-53). Thereby, in use, torque applied to the top sub 4 by a rotating drill string will be transferred to rotate both the top sub 4, main shaft 3 and body 2 (column 4, lines 45-49). Thus, McGarian does not teach of “a first body and a second body, the bodies being mounted for relative rotation” as recited in claims 1 and 2 of the present invention. Instead, in use, the body 2 and the top sub 4 of McGarian are locked together via the main shaft 3 by locked thread connection 7 and collar 25 engaged in splines 23, 23A and interlocked dogs 28 and 16 as detailed on column 4, lines 45-52 of McGarian. Thus, there is no relative rotation between body 2 and top-sub 4.

McGarian further teaches that the body 2 may be released by reversing the direction of rotation of the drill string, causing a reverse flank 30 of the collar dogs 28 to engage the dogs 16 of the body 2. The alternate face 30 of the collar dogs 28 is angled so as to act as a cam surface and bias the collar up-hole and thereby disengaging the collar 25. This allows the threads 13 and 22 to disengage, thus separating the body 2 from the main shaft 3 (column 4, line 55 - column 5, line 2). Therefore, according to the teaching of McGarian, the releasable joint is released by unlocking the locking means (23, 25, 28, 16). In addition, as the releasable joint of McGarian is locked in normal use with the releasable joint in its made-up configuration, locking the bodies relative to one another cannot be used to facilitate release of the joint. Thus, there is no locking means “whereby in use, locking said bodies

relative to one another facilitates application of a release force through the first body to the releasable joint, to release said joint to thereby separate the tool from said part of the assembly” as recited by current claims 31 and 32 of the present invention. Thus, for at least the above reasons, claims 31 and 32 as currently presented, and all claims dependent therefrom, are novel over the teachings of McGarian, and this rejection should be withdrawn.

Claims 4-10, 12-19, 23-26, 29 and 30 were rejected by the Examiner under 35 USC 103 as being unpatentable over McGarian in view of US 6 279 962 to Righi et al (hereinafter " Righi").

The connection between the leading 1 and trailing 2 bodies of Righi has a protective sleeve 3, which prevents relative rotation therebetween (column 2, lines 41-44 and 55-59). Therefore Righi does not teach of a “first body and a second body, the bodies being mounted for relative rotation” as recited by current claim 31. As this feature is disclosed in neither McGarian nor Righi, claims 31 and 32 as presently on file are patentable over McGarian in view of Righi.

Furthermore, the connection of Righi requires unlocking of the bodies 1 and 2 relative to each other to release the joint (column 5, lines 16-25). Righi does not teach of a locking means “whereby in use, locking said bodies relative to one another facilitates application of a release force through the first body to the releasable joint, to release said joint to thereby separate the tool from said part of the assembly” as required by claims 31 and 32 of the present invention. As this feature is disclosed in neither McGarian nor Righi, current claims 31 and 32, and all claims dependent therefrom, are patentable over McGarian in view of Righi. Thus, it is submitted that claims 31 and 32 are patentably distinguished from the teachings of McGarian, even in view of Righi, and that this rejection should also be withdrawn.

Both McGarian and Righi are concerned with locking a piece of shaft to another piece of shaft. Neither teaches or suggests of “locking the drive shaft relative to the motor body” as required by claim 35 as currently presented. Further, as discussed above, neither McGarian nor Righi disclose locking of two bodies to facilitate the release, rather both involve unlocking of bodies. As such, neither McGarian nor Righi disclose a selectively releasable joint whereby “locking the drive shaft relative to the motor body facilitates application of a release force” as recited in current claim 35. Thus, claim 35 as presently on file is patentable over McGarian in view of Righi.

As is made clear on column 1, lines 66-68 of Righi, body 1 of Righi is a connection body for connecting a drive shaft 25 via a drive connection structure 8 to a drilling tool 26. Connection body 1 is clearly not a motor body. Thus, neither McGarian nor Righi teach of “locking a rotatable drill bit drive shaft of the drilling motor relative to a body of the motor” as recited in claim 25 as presently on

file. Even if connection body 1 of Righi were taken to be a motor body, which it is not, then Righi would not teach of a drilling assembly having "a selectively releasable joint between a drilling motor of the assembly and the drill bit", rather connection body 1 connects directly to drill bit 25. Thus, current claim 55 is patentable over McGarian in view of Righi.

As all independent claims have been distinguished from the art cited in the office action, it is clear that all claim that depend from these independent claims are patentably distinct from the cited references for at least the same reasons as well as for the additional features that they recite.

In view of the above, all rejections have been overcome so that the entire application is believed to be in condition for allowance, early notice of which would be appreciated. Should any issues remain, a personal or telephonic interview is respectfully requested to discuss the same in order to expedite the allowance of all the claims in this application.

Finally, a revised PTO Form 1449 is enclosed to correct certain typographical errors in the listing of references AA, AB and AH. As the examiner has already reviewed these references, a replacement page acknowledging these references would be appreciated.

Respectfully submitted,



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PROPOSED DRAWING REVISIONS

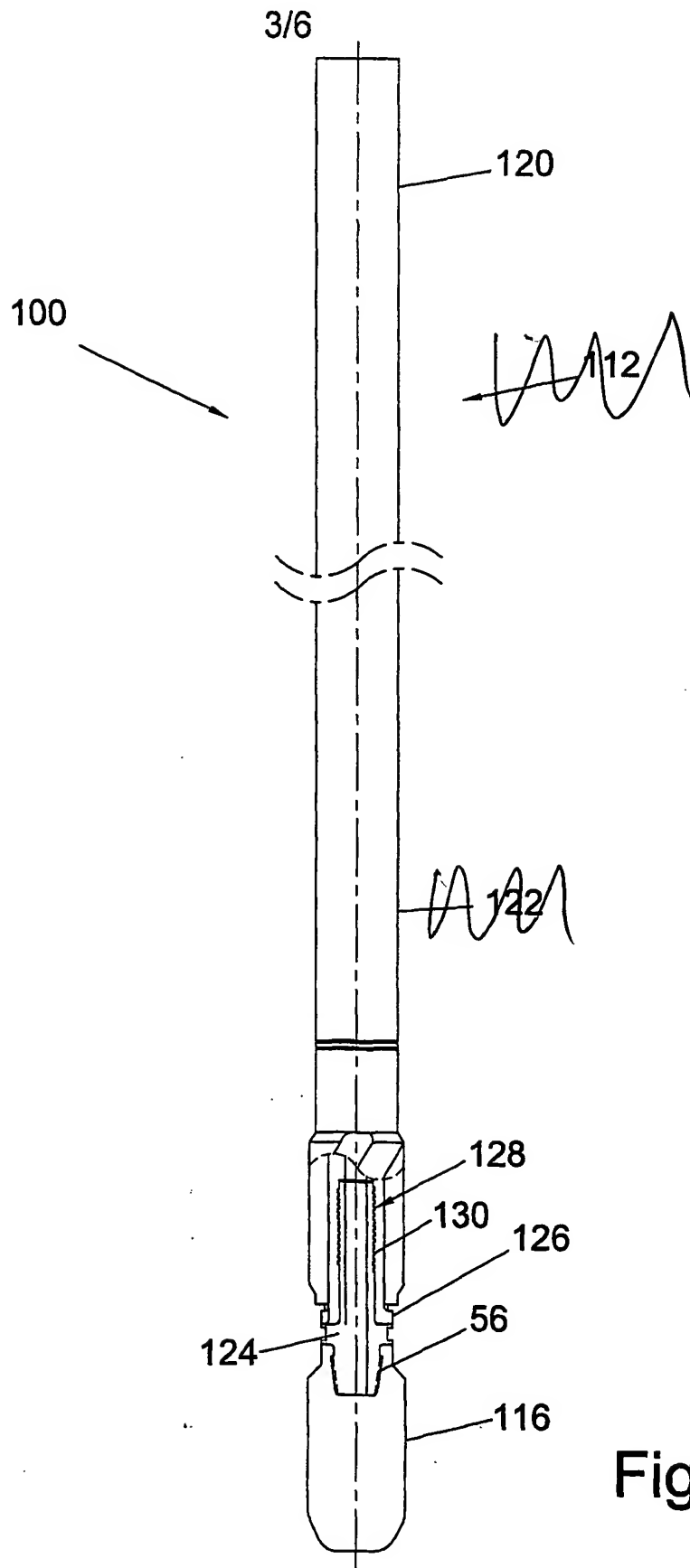


Fig. 3A